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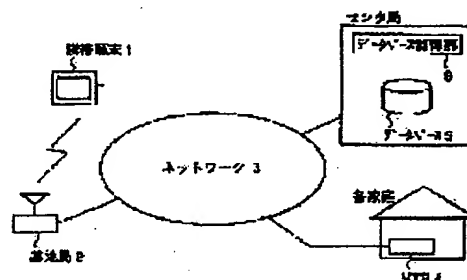
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(54) REMOTE CONTROLLER AND COMMUNICATION EQUIPMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To enable the accurate remote control of an electronic equipment to be executed even from a distant place.

SOLUTION: A program table consisting of the broadcasting channel and the broadcasting start time of the program, etc., for example, is recorded in a database 5 as information required for preserving recording in VTR 4. In a portable terminal 1, communication is executed with the database 5, a base station 2 and a network 3 and the program table is received and displayed. A user refers to the program table, recognizes the broadcasting channel and the broadcasting start time, etc., of the program to be recording-preserved and inputs it in the portable terminal 1. The pieces of information are transmitted to VTR 4 with the base station 2 and the network 3 and recording preservation is executed in VTR 4 by this.



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CLAIMS

[Claim(s)]

[Claim 1] The database with which it is remote control which carries out remote control of the electronic equipment, and required information required for control of said electronic equipment is recorded, A receiving means to communicate through a network and to receive said required information, An output means to output said required information received by said receiving means, Remote control characterized by having the actuation means operated when controlling said electronic equipment, and a transmitting means to transmit the actuation information corresponding to actuation of said actuation means to said electronic equipment through said network.

[Claim 2] The electronic equipment which performs predetermined processing, and remote control which carries out remote control of said electronic equipment, It has the database with which required information required for control of said electronic equipment is recorded. They are said electronic equipment, remote control, and the communication device to which the database was connected through the network. Said remote control Said database and a receiving means to communicate through said network and to receive said required information, An output means to output said required information received by said receiving means, The communication device characterized by having the actuation means operated when controlling said electronic equipment, and a transmitting means to transmit the actuation information corresponding to actuation of said actuation means to said electronic equipment through said network.

[Claim 3] The communication device according to claim 2 characterized by having further an updating means to update the contents of record of said database.

[Claim 4] It is the communication device according to claim 2 characterized by being information for said required information being the information about the program by television broadcasting, for said electronic equipment being a video tape recorder, and for said actuation information performing image transcription reservation to said video tape recorder.

[Claim 5] Said actuation information is a communication device according to claim 2 characterized by being transmitted to said electronic equipment after being received by the communication terminal in which the communication link through said network is possible.

[Claim 6] The read-out means which reads said required information from the record medium with which it is remote control which carries out remote control of the electronic equipment, and required information required for control of said electronic equipment is recorded, An output means to output said required information read by said read-out means, Remote control characterized by having the actuation means operated when controlling said electronic equipment, and a transmitting means to transmit the actuation information corresponding to actuation of said actuation means to said electronic equipment through a network.

[Claim 7] It has the electronic equipment which performs predetermined processing, and remote control which carries out remote control of said electronic equipment. It is the communication device to which said electronic equipment and remote control were connected through the network. Said remote control The read-out means which reads said required information from the record medium with which required information required for control of said electronic equipment is recorded, An output means to output said required information read by said read-out means, The communication device characterized by having the actuation means operated when controlling said electronic equipment, and a transmitting means to transmit the actuation information corresponding to actuation of said actuation means to said electronic equipment through said network.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to remote control and a communication device. By displaying information required for control of electronic equipment especially, for example etc., a user is made to check the information and it is related with remote control and the communication device which enabled it to perform remote control of electronic equipment exactly.

[0002]

[Description of the Prior Art] For example, electronic equipment, such as a television receiver, and VTR (video tape recorder), an air conditioner, is made as [carry out / by operating a remote commander (suitably henceforth remote control) / remote control]. That is, for example [corresponding to that actuation], processing corresponding to actuation of remote control is performed by operating remote control at a television receiver, and VTR and an air conditioner by infrared radiation etc. being emitted and this infrared radiation being received with a television receiver, and VTR and an air conditioner.

[0003]

[Problem(s) to be Solved by the Invention] However, in order to perform remote control of electronic equipment in an above-mentioned case, remote control needed to be operated in comparatively near locations, such as inside of the room in which they are installed. For this reason, it was difficult to control electronic equipment, for example from comparatively distant locations, such as a going-out place.

[0004] So, recently, the electronic equipment which can perform remote control, for example through a public network (telephone line) is realized. That is, for example, there is a VTR which can perform image transcription reservation etc. by transmitting a predetermined remote control signal through a public network.

[0005] However, the user might be unable to perform remote control of VTR as desired in this case. That is, although it is necessary to specify the channel of the program recorded on videotape as remote control when performing image transcription reservation for example, from a going-out place, the start time of an image transcription, and end time, it is rare for the user to have memorized information required for such remote control, and to be out. For this reason, the mistaken channel, start time, etc. were specified and the technical problem to which the image transcription of the program for which a user wishes is not carried out occurred.

[0006] This invention is made in view of such a situation, and enables it to perform remote control of electronic equipment exactly.

[0007]

[Means for Solving the Problem] Remote control according to claim 1 is characterized by having the database with which required information required for control of electronic equipment is recorded, a receiving means to communicate through a network and to receive required information, and an output means to output the required information received by the receiving means.

[0008] It has remote control which carries out remote control of the electronic equipment, and the database with which required information required for control of electronic equipment is recorded, remote control communicates with a database through a network, and a communication device according to claim 2 is characterized by having a receiving means to receive required information, and an output means to output the required information received by the receiving means.

[0009] Remote control according to claim 6 is characterized by having the read-out means which reads required information, and an output means to output the required information read by the read-out means, from the record medium with which required information required for control of electronic equipment is recorded.

[0010] A communication device according to claim 7 is equipped with remote control which carries out remote control of the electronic equipment, and the remote control is characterized by having the read-out means which reads required information, and an output means to output the required information read by the read-out means from the record medium with which required information required for control of electronic equipment is recorded.

[0011] In remote control according to claim 1, a receiving means communicates with the database with which required information required for control of electronic equipment is recorded through a network, and is made as [receive / required information]. The output means is made as [output / the required information received by the receiving means].

[0012] In the communication device according to claim 2, remote control is made as [carry out / remote control of the electronic equipment], and required information required for control of electronic equipment is recorded on the database. In remote control, a receiving means communicates with a database through a network, and is made as [receive / required information]. The output means is made as [output / the required information received by the receiving means].

[0013] In remote control according to claim 6, a read-out means reads required information from the record medium with which required information required for control of electronic equipment is recorded, and the output means is made as [output / the required information read by the read-out means].

[0014] In the communication device according to claim 7, remote control is made as [carry out / remote control of the electronic equipment]. And in this remote control, a read-out means reads required information from the record medium with which required information required for control of electronic equipment is recorded, and the output means is made as [output / the required information read by the read-out means].

[0015]

[Embodiment of the Invention] Although the example of this invention is explained below, it is as follows, when an example [/ in the parenthesis after each means] (however, an example) is added and the description of this invention is described before that, in order to clarify correspondence relation between each means of invention given in a claim, and the following examples.

[0016] Namely, remote control according to claim 1 is remote control which carries out remote control of the electronic equipment (for example, VTR4 shown in drawing 1). The database with which required information required for control of electronic equipment is recorded (for example, database 5 shown in drawing 1), A receiving means to communicate through networks (for example, network 3 shown in drawing 1), and to receive required information (for example, communication link I/F (interface) section 12 shown in drawing 3), An output means to output the required information received by the receiving means (for example, a display 18, a loudspeaker 19, etc. which are shown in drawing 3), The actuation means operated when controlling electronic equipment (for example, the keyboard 15 shown in drawing 3 , a tablet 16, the input pen 17, etc.), It is characterized by having transmitting means (for example, communication link I/F section 12 shown in drawing 3) to transmit the actuation information corresponding to actuation of an actuation means to electronic equipment through a network.

[0017] The electronic equipment by which a communication device according to claim 2 performs predetermined processing (for example, VTR4 shown in drawing 1), Remote control which carries out remote control of the electronic equipment (for example, personal digital assistant 1 shown in drawing 1 R> 1), The database with which required information required for control of electronic equipment is recorded It has. Electronic equipment, remote control, (For example, database 5 shown in drawing 1) It is the communication device to which the database was connected through networks (for example, network 3 shown in drawing 1). Remote control And a database, A receiving means to communicate through a network and to receive required information (for example, communication link I/F section 12 shown in drawing 3), An output means to output the required information received by the receiving means (for example, the display 18 shown in drawing 3 , a loudspeaker 19, etc.), The actuation means operated when controlling electronic equipment (for example, the keyboard 15 shown in drawing 3 , a tablet 16, the input pen 17, etc.), It is characterized by having transmitting means (for example, communication link I/F section 12 shown in drawing 3) to transmit the actuation information corresponding to actuation of an actuation means to electronic equipment through a network.

[0018] A communication device according to claim 3 is characterized by having further updating means (for example, database control section 6 shown in drawing 1) to update the contents of record of a database.

[0019] A communication device according to claim 5 is characterized by being transmitted to electronic equipment (for example, VTR36 shown in drawing 10 or drawing 11), after being received by the communication terminals (for example, the telephone 31 shown in drawing 10 , telephone 41 shown in drawing 11) in which the

communication link whose actuation information minds a network is possible.

[0020] Remote control according to claim 6 is remote control which carries out remote control of the electronic equipment (for example, VTR4 shown in drawing 12). The read-out means which reads required information from the record media (for example, record medium 52 shown in drawing 12) with which required information required for control of electronic equipment is recorded (for example, mechanical component 61 shown in drawing 13), An output means to output the required information read by the read-out means (for example, the display 18 shown in drawing 13 , a loudspeaker 19, etc.), The actuation means operated when controlling electronic equipment (for example, the keyboard 15 shown in drawing 13 , a tablet 16, the input pen 17, etc.), It is characterized by having transmitting means (for example, communication link I/F section 12 shown in drawing 13) to transmit the actuation information corresponding to actuation of an actuation means to electronic equipment through a network.

[0021] The electronic equipment by which a communication device according to claim 7 performs predetermined processing (for example, VTR4 shown in drawing 12), It has remote control (for example, personal digital assistant 51 shown in drawing 12) which carries out remote control of the electronic equipment. It is the communication device to which electronic equipment and remote control were connected through networks (for example, network 3 shown in drawing 12). A read-out means by which remote control reads required information from the record media (for example, record medium 52 shown in drawing 12) with which required information required for control of electronic equipment is recorded (for example, mechanical component 61 shown in drawing 13), An output means to output the required information read by the read-out means (for example, the display 18 shown in drawing 13 , a loudspeaker 19, etc.), The actuation means operated when controlling electronic equipment (for example, the keyboard 15 shown in drawing 13 , a tablet 16, the input pen 17, etc.), It is characterized by having transmitting means (for example, communication link I/F section 12 shown in drawing 13) to transmit the actuation information corresponding to actuation of an actuation means to electronic equipment through a network.

[0022] In addition, of course, this publication does not mean limiting to what described each means above.

[0023] Drawing 1 shows the configuration of one example of Remote Control System which applied this invention. In this Remote Control System, it is made as [carry out / because a user operates a personal digital assistant 1 / remote control of VTR4 with which the user is installed in the house].

[0024] That is, a personal digital assistant 1 is an information personal digital assistant (PCS) for individuals etc., and is made as [perform / a communication link / with a base station 2 / wireless]. A base station 2 receives the signal transmitted through a network 3, and is made as [transmit / to a personal digital assistant 1 / the signal] while receiving the signal from a personal digital assistant 1 and transmitting the signal to the equipment in which a predetermined communication link is possible through a network 3. The network 3 consists of public networks etc. Therefore, it connects with a network 3 through a base station 2, and, thereby, the personal digital assistant 1 is made through the base station 2 and the network 3 as [perform / the equipment and the communication link which can communicate].

[0025] in addition, the network 3 — wire circuits other than a public network — or constituting from a wireless circuit etc. is also possible.

[0026] VTR4 is installed in the house (each home) of the user who is VTR which has the function of image transcription reservation and others, for example, is the owner of a personal digital assistant 1 etc. Moreover, it connects with the network 3 and this VTR4 is made as [perform / by this / through a network 3 / by supplying a predetermined signal / that remote control].

[0027] The center station has the database 5 and the database control section 6. The race card of the program by television broadcasting, the information (suitably henceforth program information) about the contents of each program, etc. are recorded on the database 5 as required information required for control (in this example, it considers, for example as image transcription reservation etc.) of VTR4. It connects with the network 3 and the database 5 is made as [acquire / by accessing through a network 3 / from a database 5 / a race card or program information which were mentioned above]. In addition, the race card and program information as required information can also be constituted with image (still picture, animation) data, and voice data besides displayable datas, such as alphabetic data.

[0028] The database control section 6 is made as [update / the contents of record of a database 5]. That is, if needed, the database control section 6 is operated by the operator of a center office, and, thereby, is made corresponding to the actuation as [record / on a database 5 / the newest race card or the program information about a program].

[0029] In addition, the database control section 6 can be installed independently [a database 5], connects the database control section 6 with a network 3 in this case, and can perform renewal of the contents of record of a database 5 through a network 3 from the database control section 6. Moreover, two or more databases with which required information was recorded can be formed besides a database 5, and renewal of two or more databases is performed to coincidence through a network 3 in this case. Furthermore, it is also possible for it to be made to carry out through wireless circuits, such as other, for example, a satellite, circuits [network / 3 / where the renewal of a database becomes by the wire circuit in this example in this case], and a ground wave.

[0030] Next, with reference to drawing 2, processing in case for example, image transcription reservation is performed is explained as remote control of VTR4. For example, in a going-out place etc., when neither the channel of the program nor start time is known, the user who is going to perform image transcription reservation of a program to VTR4 operates a personal digital assistant 1, and accesses a database 5 (1).

[0031] Here, access to a database 5 from a personal digital assistant 1 is performed through a base station 2 and a network 3. Although the communication link between a personal digital assistant 1 and a base station 2 is performed on radio as mentioned above, therefore these constitute the radio communications system, as this radio communications system, the things (for example, personal handy phone system (PHS) etc.) to depend, for example on a microcell method can be used.

[0032] After accessing a database 5, a user is operating a personal digital assistant 1, and makes the race card and program information which are recorded on the database 5 transmit to a personal digital assistant 1. Thereby, from a database 5, a race card and program information are transmitted to a personal digital assistant 1 through a network 3 and a base station 2 (2). In a personal digital assistant 1, the race card and program information which have been transmitted from the database 5 are received, and it is displayed if needed (output). A user checks the broadcast channel of the program for which it wishes, and information required for image transcription reservation of start time etc. with reference to the race card and program information which were displayed.

[0033] Then, a user is operating a personal digital assistant 1, and accesses VTR4 through a base station 2 and a network 3 (3). And a user performs image transcription reservation of a program which is transmitting to VTR4 through a base station 2 and a network 3, and asks for the checked broadcast channel, start time, etc. (4).

[0034] As mentioned above, in a personal digital assistant 1, a communication link is performed through the database 5 with which required information, such as a race card required for image transcription reservation of VTR4 and program information, is recorded, and a network 3, and a race card and program information are received. And the race card and program information are displayed (output), and information required in order to carry out image transcription reservation of the program for which it asks by the user by this is checked. Therefore, a user can perform remote control of VTR4 exactly at the time of day of arbitration from the location of arbitration. That is, a user can perform exactly image transcription reservation of the program for which it wishes for example, from a going-out place etc. in this case.

[0035] Next, drawing 3 shows the example of a configuration of a personal digital assistant 1. The antenna 11 is made as [output / the signal from the communication link I/F section 12 / through radio] while receiving the electric wave from a base station 2 and outputting the input signal to the communication link I/F section 12. The communication link I/F section 12 is made as [cut / establish the link between base stations 2, and / the link which is an interface for communicating between base stations 2 (data communication), for example, was established between base stations 2]. A control section 13 consists of a CPU, ROM, RAM, etc., and is made as [control / the whole equipment]. The user I/F section 14 is made as [show / information] to the user while consisting of a keyboard 15, a tablet 16, an input pen 17, a display 18, a loudspeaker 19, etc. and receiving the input of the information from a user.

[0036] That is, a keyboard 15, and a tablet 16 and the input pen 17 are operated, the case where required information is read from a database 5, when carrying out remote control of VTR4, and when [other] information needs to be inputted. The display 18 is made as [display / the things (an image, alphabetic character, etc.) among the information supplied from a control section 13 which can be displayed]. The loudspeaker 19 is made as [output / the thing in which a voice output is possible among the information supplied from a control section 13].

[0037] In addition, in this user I/F section 14, it is made as [offer / a graphical user interface (GUI)] as opposed to the user.

[0038] Drawing 4 shows the example of a configuration of VTR4. In this example, VTR4 consists of a reservation control section 21 and VTR block 25. The reservation control section 21 consists of the communication link I/F section 22, a control section 23, and the block I/F section 24 for VTR, receives the signal for remote control

transmitted through a network 3, and is made as [perform / control corresponding to the input signal]. That is, the communication link I/F section 22 is an interface for performing the communication link through a network 3, and is made as [perform / according to a predetermined communication procedure / communications control]. A control section 23 consists of a CPU, ROM, RAM, etc., and is made as [control / the reservation control-section 21 whole]. The block I/F section 24 for VTR is made as [exchange / data with the VTR block 25] instead of the control section 23. The VTR block 25 has a function as an original VTR, and is made as [perform / record, playback, etc. to a video tape] (in addition by this example, the function to make timed recording shall also have the VTR block 25).

[0039] Next, with reference to drawing 5 and drawing 6, the procedure of the communication link which a personal digital assistant 1 performs is explained. First, drawing 5 shows the communication procedure between a personal digital assistant 1 and a database 5. If a tablet is operated by the user using a keyboard 15 or the input pen 17 so that a database 5 may be accessed, the actuation signal (suitably henceforth a database access signal) corresponding to the actuation will be outputted to a control section 13 from the user I/F section 14. A control section 13 will control the communication link I/F section 12 to establish a communication link with a database 5, if a database access signal is received. According to control of a control section 13, the communication link I/F section 12 accesses a base station 2 through an antenna 11, and establishes the communication link between base stations 2. Then, the communication link I/F section 12 requires access to a database 5 from a base station 2, and a base station 2 will establish a communication link with a database 5 through a network 3, if this demand is received. Consequently, a communication link is established through a base station 2 and a network 3 between a personal digital assistant 1 (communication link I/F section 22) and a database 5.

[0040] It will communicate with a database 5 through a base station 2 and a network 3, and the communication link I/F section 22 will require a race card and program information, if a communication link with a database 5 is established as mentioned above and this will be in the condition which can be communicated. In a database 5, reception of this demand transmits a race card and program information to a personal digital assistant 1. In a personal digital assistant 1, through an antenna 11, it is received in the communication link I/F section 12, and this race card and program information are supplied to a control section 13.

[0041] RAM to harbor is made to memorize it when a control section 13 receives a race card and program information. And read the race card and program information which were memorized by RAM, and it is made to supply and display on a display 18, or is made to supply and output to a loudspeaker 19 again.

[0042] In addition, when the race card or program information which were memorized by RAM cannot be displayed on a display 18 at once, only a part to be able to display reads a race card or program information from RAM, and the control section 13 is made as [make / it / supply and display on a display 18]. In this case, if a tablet 16 is operated using a keyboard 15 or the input pen 17, the control section 13 is made as [carry out / scrolling etc. / the screen of a display 18], and is made as [display / by this / the part as which a race card or program information was not displayed].

[0043] Moreover, the control section 13 is made as [make / the communication link I/F section 12 / interrupt reception of data], when RAM cannot be made to memorize at once the race card and program information which have been transmitted and the predetermined race card and the program information on the amount of data are received. In this case, about the race card and program information which were not able to be received, the communication link I/F section 12 is made as [require / of a database 5 / transmission of those information], when it is necessary to output them from a display 18 or a loudspeaker 19.

[0044] A user checks information required to carry out image transcription reservation of the program for which it asks with reference to the race card and program information which were outputted from the display 18 or the loudspeaker 19 as mentioned above. And after performing the check, a user operates the user I/F section 14 (a keyboard 15 or a tablet 16, and input pen 17) so that a communication link with a database 5 may be cut. Then, from the user I/F section 14, the actuation signal (suitably henceforth a database link release signal) corresponding to the actuation is outputted to a control section 13 from the user I/F section 14. A control section 13 will control the communication link I/F section 12 to cut a communication link with a database 5, if a database link release signal is received (release). The communication link I/F section 12 cuts a communication link with a base station 2 through an antenna 11 according to control of a control section 13. A base station 2 will cut a communication link with the database 5 established through the network 3, if a communication link with a personal digital assistant 1 is cut.

[0045] Next, drawing 6 shows the communication procedure between a personal digital assistant 1 and VTR4. In addition, although the communication link between a personal digital assistant 1 and VTR4 as well as the case in

the communication link between the personal digital assistants 1 and databases 5 which were explained by drawing 5 is performed through a base station 2 and a network 3, in drawing 6, illustration of the part about a base station 2 is omitted.

[0046] Even if the user has not memorized, when information required to carry out image transcription reservation is memorized, as drawing 5 R> 5 explained, when you wish to perform image transcription reservation after he checks information required to carry out image transcription reservation, he operates the user I/F section 14 so that a communication link with VTR4 may be established. Then, from the user I/F section 14, the actuation signal (suitably henceforth a VTR access signal) corresponding to the actuation is outputted to a control section 13 from the user I/F section 14, and a communication link with VTR4 is hereafter established like the case in drawing 5 from it.

[0047] Then, a user inputs information (suitably henceforth reservation information) (actuation information) required to carry out image transcription reservation of the program which operates and wishes the user I/F section 14. Through a control section 13 and the communication link I/F section 12, this reservation information is outputted from an antenna 11, and is further transmitted to VTR4 through a base station 2 and a network 3.

[0048] With VTR4, it is received by the communication link I/F section 22, and the reservation information from a personal digital assistant 1 is outputted to a control section 23. In a control section 23, reservation information is changed into the format suitable for performing image transcription reservation to the VTR block 25, and is outputted to the VTR block 24 through the block I/F section 24 for VTR. In the VTR block 24, reception of reservation information fulfills image transcription reservation according to the reservation information.

[0049] Then, if required, from the VTR block 25, the information (for example, the channel of the program which records on videotape, its start time, etc.) (suitably henceforth an acknowledgement message) for checking the program which carried out image transcription reservation will be outputted to the reservation control section 21. This acknowledgement message is transmitted to a personal digital assistant 1 through a network 3 and a base station 2, and in a personal digital assistant 1, if an acknowledgement message is received, it will be displayed in a display 18.

[0050] A user redoes the input of reservation information again, after performing actuation which cancels the image transcription reservation, when an acknowledgement message is seen, it judges whether image transcription reservation is carried out correctly and image transcription reservation is not made correctly. Moreover, when image transcription reservation is performed correctly, a user operates the user I/F section 14 so that a communication link with VTR4 may be cut. Then, the actuation signal (suitably henceforth a VTR link release signal) corresponding to the actuation is outputted from the user I/F section 14 to a control section 13 from the user I/F section 14, and a communication link with VTR4 is cut from it like the case in drawing 5 (release).

[0051] In addition, after transmitting reservation information from a personal digital assistant 1 although it was made to make VTR4 fulfill image transcription reservation in addition while the communication link between a personal digital assistant 1 and VTR4 is established in an above-mentioned case, it is possible to cut the communication link between a personal digital assistant 1 and VTR4, and to make it also make VTR4 fulfill image transcription reservation after that immediately. It becomes impossible however, to perform a check (reception of an acknowledgement message) which was mentioned above in this case.

[0052] Moreover, the number of the telephone line to which VTR4 and the database 5 are connected is beforehand registered into the control section 13, and access to VTR4 and a database 5 is made as [carry / by referring to the number].

[0053] Next, the processing performed with a personal digital assistant 1 is further explained with reference to drawing 7 thru/or drawing 9. Drawing 7 shows signs that the race card is displayed in the personal digital assistant 1. In a personal digital assistant 1, as a race card, if possible, what consists of program columns of the part on the 1st about all the receivable channels of a broadcasting station will be displayed. In this case, each program column is classified by color and displayed for every genres, such as a sport, and music, a drama, and, thereby, is made as [recognize / the genre of a program / a user / immediately].

[0054] A user chooses the program column corresponding to the program by operating the user I/F section 14 to find the program for which it wishes and check the contents out of a race card. The actuation signal corresponding to this selection actuation is received by the control section 13. Then, a control section 13 outputs the program information corresponding to the selected program to the user I/F section 14. Thereby, as shown in drawing 8, on the display 18 of the user I/F section 14, the program information (an animation, a still picture, alphabetic character) which can be displayed is displayed, and the program information (voice) in which a voice output is possible is outputted at a loudspeaker 19. Therefore, a user can check the contents of the program in

this case:

[0055] In addition, the program column is operated by the user I/F section 14, and also reference of such program information is made as [carry / it / by carrying out predetermined actuation of the user I/F section 14].

[0056] Although image transcription reservation can be performed by a user's operating it so that a communication link with VTR4 may be established for the user I/F section 14, as it mentioned above, when image transcription reservation of a program was wished, and inputting reservation information further, image transcription reservation is made as [carry / in addition to this, for example / it / as follows].

[0057] That is, in the condition that the race card is displayed, if the program column of the program which carries out image transcription reservation is chosen by operating the user I/F section 14, by the control section 13, reservation information required for image transcription reservation of the channel of the selected program, start time, end time, etc., etc. will be recognized by referring to a race card, and a communication link with VTR4 will be established after that. And hereafter, as drawing 6 explained, image transcription reservation is performed.

[0058] Moreover, in the condition that program information is outputted, if the user I/F section 14 is operated so that image transcription reservation may be performed, in a control section 13, reservation information required for image transcription reservation of the program corresponding to the program information currently outputted will be recognized by referring to a race card, and image transcription reservation will be hereafter performed like the case where it mentions above.

[0059] In this case, since a user does not need to input reservation information, he can perform image transcription reservation by easier actuation.

[0060] In addition, by carrying out predetermined actuation of the user I/F section 14, as shown in drawing 9, reservation information is displayed to check reservation information.

[0061] Moreover, in the above-mentioned case, it was made to make a channel, start time, end time of a program, etc. into reservation information, but it is also possible to make it include the so-called G code in a race card, and to use this G code for it as reservation information.

[0062] Furthermore, to a personal digital assistant 1, it is possible to make the following processings perform. That is, for example, a user is operating the user I/F section 14, and registers the own favorite genre, the actor, etc. into the personal digital assistant 1. In this case, in a personal digital assistant 1, periodically or irregularly, access to a database 5 is made and, thereby, a race card and program information are received. And when the program of the genre registered and the program on which the actor is appearing are searched with referring to them and there is such a program by it, that is outputted by voice or the image.

[0063] In this case, a user can recognize easily that a favorite program is broadcast and becomes possible [carrying out without as a result, for example, image transcription reservation of that program, forgetting].

[0064] Next, VTR4 shown in drawing 4 has some which do not have such communication facility in the electronic equipment set as the object of remote control, although itself was made as [perform / the communication link between personal digital assistants 1]. That is, there are some which consist of only VTR blocks 25, for example in VTR. Then, the example of a system configuration in each home in the case of carrying out remote control of such a VTR (a user's house) is explained with reference to drawing 10 and drawing 11.

[0065] The example of drawing 10 consists of the telephones 31 and VTRs36 which become only with the VTR block 25 as a communication terminal in which the communication link through a network 3 is possible. Telephone 32 consists of telephone block 32, the control section 23 of drawing 4 and the control section 34 which has the same function, and the information transfer section 35 that controls an exchange of the data between a control section 34 and VTR36.

[0066] The telephone block 32 is constituted including the communication link I/F section 22 of drawing 4, and the communication link I/F section 33 which has the same function, and has the function as original telephone.

[0067] In this case, the reservation information which the exchange of data with a personal digital assistant 1 was performed in the communication link I/F section 33, and was received there is supplied to the information transfer section 35 through a control section 34. If the information transfer section 35 receives reservation information, it will be transmitted to the VTR block 25 (remote transfer), and, thereby, image transcription reservation will be fulfilled by the VTR block 25.

[0068] In addition, telephone 31 needs to prepare and constitute others, a control section 34, and the information transfer section 35 in this case. [block / 32 / which has a function as original telephone / telephone]

[0069] Next, the example of drawing 11 consists of the telephones 41, the adapters 42 which function on VTR36 as an interface between attached remote control 34 and telephones 41, the remote control 34, and VTRs36 as a

communication terminal in which the communication link which minds a network 3 too is possible. In addition, about the case in drawing 10 , and the corresponding part, the same sign is attached among drawing, and, below, the explanation is omitted suitably.

[0070] Telephone 41 consists of only telephone blocks 32 which have the function as original telephone. The adapter 42 consists of a control section 23 of drawing 4 , a control section 43 which has the same function, and the I/F section 44 for remote control which controls remote control 44 according to control of a control section 43.

[0071] In this case, the reservation information received in the communication link I/F section 33 of the telephone block 32 in telephone 41 is supplied to the I/F section 44 for remote control through the control section 34 in an adapter 42. The I/F section 44 for remote control will control remote control 45 corresponding to the reservation information, if reservation information is received. Then, according to control of the I/F section 44 for remote control, to VTR36, outgoing radiation of the infrared radiation corresponding to reservation information is carried out, and image transcription reservation is fulfilled by receiving this with VTR36 from remote control 45.

[0072] The availability of VTR (VTR36) which does not have communication facility in the above case can be raised.

[0073] Next, drawing 12 shows the configuration of other examples of Remote Control System which applied this invention. In addition, about the case in drawing 1 , and the corresponding part, the same sign is attached among drawing, and, below, the explanation is omitted suitably.

[0074] A personal digital assistant 51 can detach and attach the record medium 52 which becomes by the magnetic disk (floppy disk), CD-ROM and an optical card, the IC card, and others, and it is made as [read / the contents of record], and also it is constituted like the personal digital assistant 1.

[0075] That is, drawing 13 shows the example of a configuration of a personal digital assistant 51. In addition, about the case in drawing 3 , and the corresponding part, the same sign is attached among drawing. That is, a personal digital assistant 51 drives a record medium 52, and the mechanical component 61 which reads the contents of record is formed, and also it is constituted like the personal digital assistant 1 of drawing 3 .

[0076] Required information currently recorded on the database 5 of drawing 1 , such as a race card and program information, and the same information are recorded on drawing 12 by return and the record medium 52.

[0077] In Remote Control System constituted as mentioned above, a user equips a personal digital assistant 51 with a record medium 52, and he operates the user I/F section 14 so that the playback may be performed. Thereby, in a mechanical component 61, the required information currently recorded on the record medium 52 is read. This required information is supplied and outputted to the user I/F section 14 through a control section 13.

[0078] Therefore, since information required in order that a user may do image transcription reservation of the program for which it asks like the case in drawing 1 also in this case can be checked, remote control of VTR4 can be exactly performed at the time of day of arbitration from the location of arbitration.

[0079] In addition, in this example, when broadcast of all the programs corresponding to the required information recorded on the record medium 52 is completed, since a record medium 52 will obsolete, in this case, a user needs to receive the record medium with which the required information about the newest program was recorded, and needs to exchange it for a record medium 52.

[0080] As mentioned above, although the case where this invention was applied about remote control of VTR was explained, this invention can be applied when carrying out remote control of all the electronic equipment, others, for example, a television receiver, such as an air conditioner. [VTR]

[0081] In addition, although this example explained the case where image transcription reservation was performed, as remote control, it is also possible to perform other remote control.

[0082] Furthermore, although the equipment which performs remote control was used as the portable personal digital assistant 1 (or 51) in this example, the equipment which performs remote control may necessarily be unportable.

[0083] Moreover, in this example, although the personal digital assistant 1 (or 51) was made [of the communication link by wireless] possible, a personal digital assistant 1 can also be made into the thing in which a communication link with a cable is possible. However, the location which performs remote control in this case will be restricted.

[0084]

[Effect of the Invention] According to remote control and a communication device according to claim 2 according to claim 1, a communication link is performed through the database with which required information required for

control of electronic equipment is recorded, and a network, and required information is received and outputted. Therefore, it becomes possible to perform control of electronic equipment exactly based on required information. [0085] According to remote control and a communication device according to claim 7 according to claim 6, required information is read and outputted from the record medium with which required information required for control of electronic equipment is recorded. Therefore, it becomes too possible to control electronic equipment exactly.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is drawing showing the configuration of the 1st example of Remote Control System which applied this invention.

[Drawing 2] It is drawing for explaining actuation of the example of drawing 1 .

[Drawing 3] It is the block diagram showing the example of a configuration of the personal digital assistant 1 of drawing 1 .

[Drawing 4] It is the block diagram showing the example of a configuration of VTR4 of drawing 1 .

[Drawing 5] It is drawing for explaining the communication procedure between a personal digital assistant 1 and a database 5.

[Drawing 6] It is drawing for explaining the communication procedure between a personal digital assistant 1 and VTR4.

[Drawing 7] It is drawing for explaining actuation of a personal digital assistant 1.

[Drawing 8] It is drawing for explaining actuation of a personal digital assistant 1.

[Drawing 9] It is drawing for explaining actuation of a personal digital assistant 1.

[Drawing 10] It is the block diagram showing the example of a configuration of telephone 31 and VTR36.

[Drawing 11] They are telephone 41, an adapter 42, and the block diagram showing the example of a configuration of VTR36.

[Drawing 12] It is drawing showing the configuration of the 2nd example of Remote Control System which applied this invention.

[Drawing 13] It is the block diagram showing the example of a configuration of the personal digital assistant 51 of drawing 12 .

[Description of Notations]

1 Personal Digital Assistant

3 Network

4 VTR

5 Database

6 Database Control Section

12 Communication Link I/F Section

13 Control Section

14 User I/F Section

15 Keyboard

16 Tablet

17 Input Pen

18 Display

19 Loudspeaker

31 41 Telephone

42 Adapter

51 Personal Digital Assistant

52 Record Medium

61 Mechanical Component

[Translation done.]

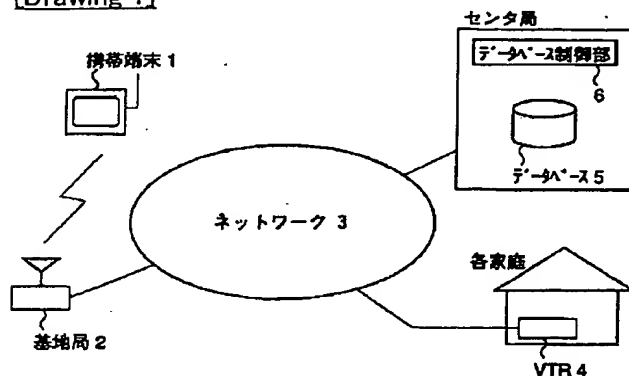
* NOTICES *

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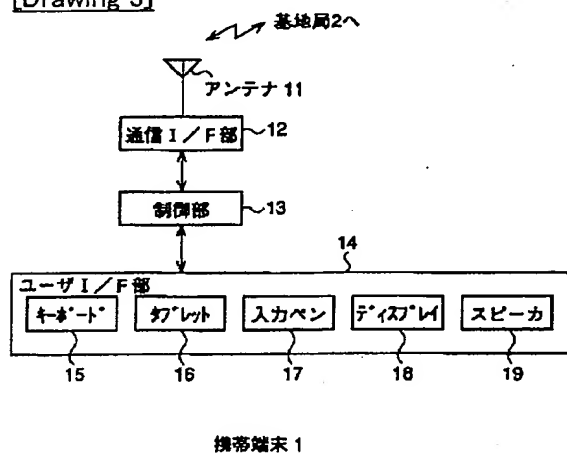
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DRAWINGS

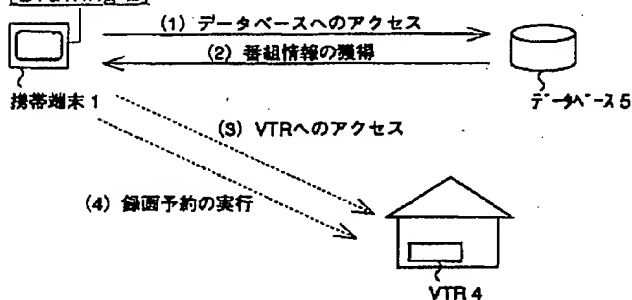
[Drawing 1]



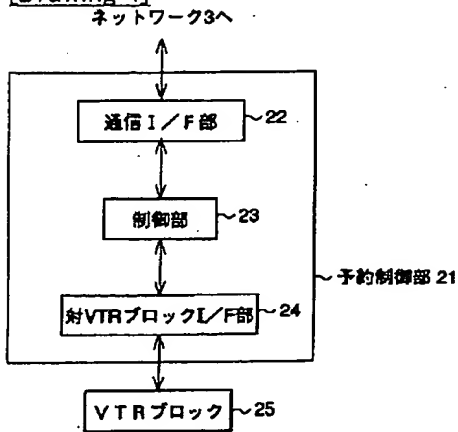
[Drawing 3]



[Drawing 2]

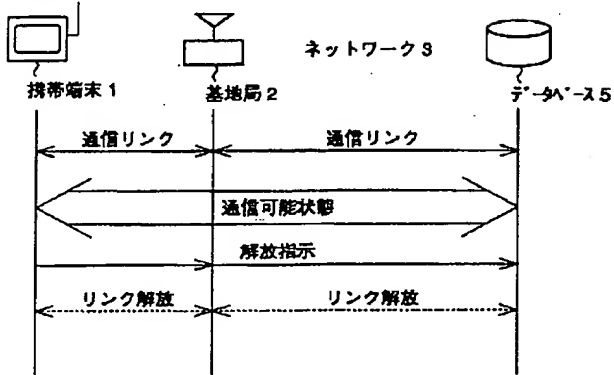


[Drawing 4]

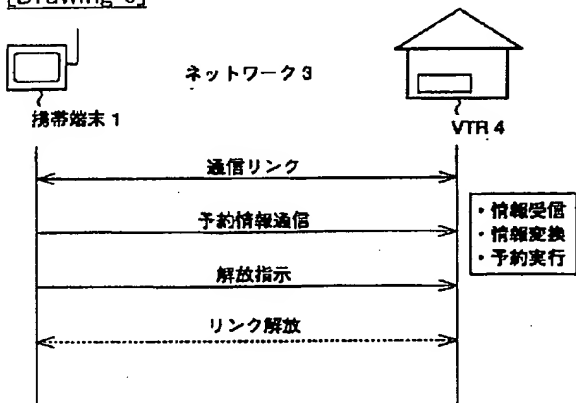


VTR 4

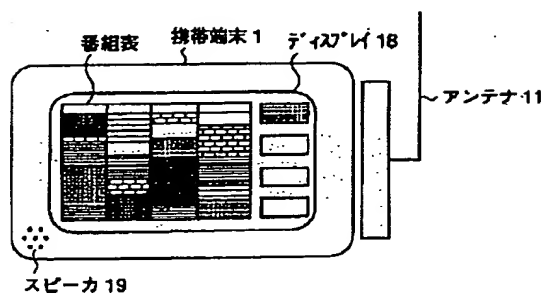
[Drawing 5]



[Drawing 6]

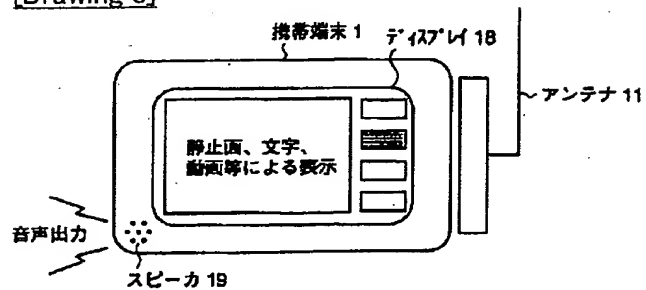


[Drawing 7]



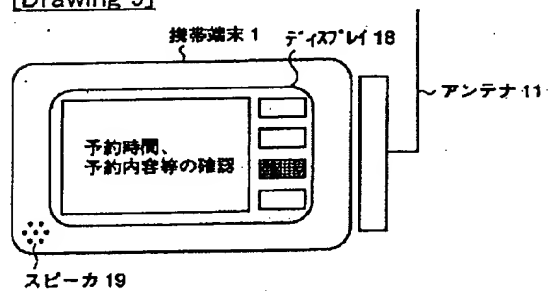
番組表表示機能

[Drawing 8]



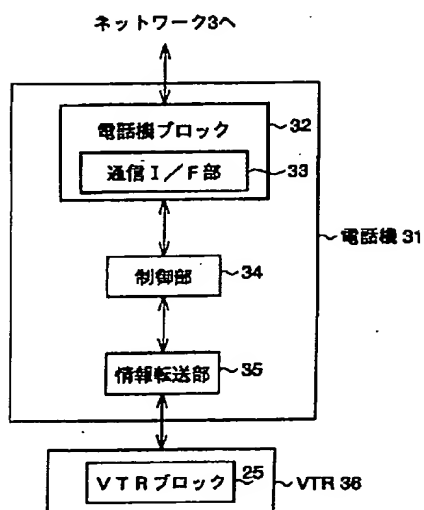
番組情報参照機能

[Drawing 9]

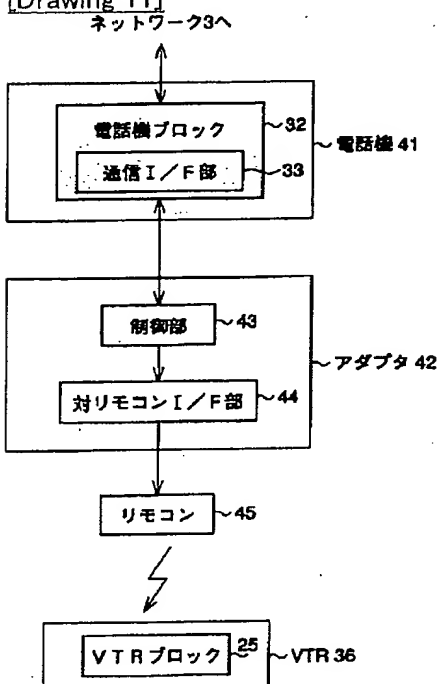


予約実行機能

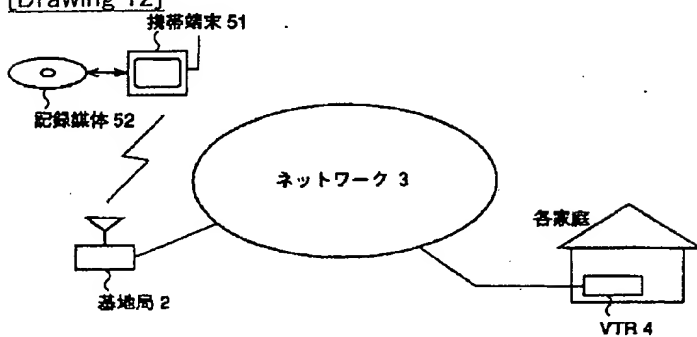
[Drawing 10]



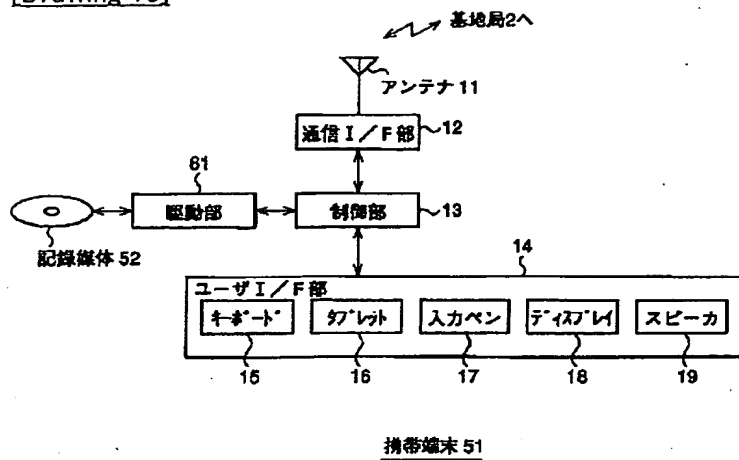
[Drawing 11]



[Drawing 12]



[Drawing 13]



[Translation done.]

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CORRECTION OR AMENDMENT

[Kind of official gazette] Printing of amendment by the convention of 2 of Article 17 of Patent Law
 [Section partition] The 3rd partition of the 7th section
 [Publication date] December 20, Heisei 14 (2002. 12.20)

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 [Date of Publication] April 15, Heisei 9 (1997. 4.15)
 [Annual volume number] Open patent official report 9-1029
 [Application number] Japanese Patent Application No. 7-258621
 [The 7th edition of International Patent Classification]

H04M 11/00 301
 G11B 15/02 346
 H04Q 9/00 301
 311
 9/02

[FI]

H04M 11/00 301
 G11B 15/02 346 Z
 H04Q 9/00 301 B
 311 L
 9/02 B

[Procedure revision]
 [Filing Date] October 3, Heisei 14 (2002. 10.3)
 [Procedure amendment 1]
 [Document to be Amended] Specification
 [Item(s) to be Amended] The name of invention
 [Method of Amendment] Modification
 [Proposed Amendment]
 [Title of the Invention] Remote control and communication system
 [Procedure amendment 2]
 [Document to be Amended] Specification
 [Item(s) to be Amended] Claim
 [Method of Amendment] Modification
 [Proposed Amendment]
 [Claim(s)]

[Claim 1] It is remote control which carries out remote control of the electronic equipment,
 The database with which required information required for control of said electronic equipment is recorded, and a
 receiving means to communicate through a network and to receive said required information,
 An output means to output said required information received by said receiving means,
 The actuation means operated when controlling said electronic equipment,
 Remote control characterized by having a transmitting means to transmit the actuation information corresponding

to actuation of said actuation means to said electronic equipment through said network.

[Claim 2] Electronic equipment which performs predetermined processing,

Remote control which carries out remote control of said electronic equipment,

It has the database with which required information required for control of said electronic equipment is recorded,

They are said electronic equipment, remote control, and the communication system to which the database was connected through the network,

Said remote control,

Said database and a receiving means to communicate through said network and to receive said required information,

An output means to output said required information received by said receiving means,

The actuation means operated when controlling said electronic equipment,

Communication system characterized by having a transmitting means to transmit the actuation information corresponding to actuation of said actuation means to said electronic equipment through said network.

[Claim 3] Communication system according to claim 2 characterized by having further an updating means to update the contents of record of said database.

[Claim 4] It is remote control which carries out remote control of the electronic equipment,

The read-out means which reads said required information from the record medium with which required information required for control of said electronic equipment is recorded,

An output means to output said required information read by said read-out means,

The actuation means operated when controlling said electronic equipment,

Remote control characterized by having a transmitting means to transmit the actuation information corresponding to actuation of said actuation means to said electronic equipment through a network.

[Claim 5] Electronic equipment which performs predetermined processing,

It has remote control which carries out remote control of said electronic equipment,

It is the communication system to which said electronic equipment and remote control were connected through the network,

Said remote control,

The read-out means which reads said required information from the record medium with which required information required for control of said electronic equipment is recorded,

An output means to output said required information read by said read-out means,

The actuation means operated when controlling said electronic equipment,

Communication system characterized by having a transmitting means to transmit the actuation information corresponding to actuation of said actuation means to said electronic equipment through said network.

[Procedure amendment 3]

[Document to be Amended] Specification

[Item(s) to be Amended] 0001

[Method of Amendment] Modification

[Proposed Amendment]

[0001]

[Field of the Invention] This invention relates to remote control and communication system. By displaying information required for control of electronic equipment especially, for example etc., a user is made to check the information and it is related with remote control and communication system which enabled it to perform remote control of electronic equipment exactly.

[Procedure amendment 4]

[Document to be Amended] Specification

[Item(s) to be Amended] 0007

[Method of Amendment] Modification

[Proposed Amendment]

[0007]

[Means for Solving the Problem] The 1st remote control of this invention is characterized by having the database with which required information required for control of electronic equipment is recorded, a receiving means to communicate through a network and to receive required information, and an output means to output the required information received by the receiving means.

[Procedure amendment 5]

[Document to be Amended] Specification

[Item(s) to be Amended] 0008

[Method of Amendment] Modification

[Proposed Amendment]

[0008] It has remote control which carries out remote control of the electronic equipment, and the database with which required information required for control of electronic equipment is recorded, remote control communicates with a database through a network, and 1st </U> communication system of this invention is characterized by having a receiving means to receive required information, and an output means to output the required information received by the receiving means.

[Procedure amendment 6]

[Document to be Amended] Specification

[Item(s) to be Amended] 0009

[Method of Amendment] Modification

[Proposed Amendment]

[0009] The 2nd remote control of this invention is characterized by having the read-out means which reads required information, and an output means to output the required information read by the read-out means, from the record medium with which required information required for control of electronic equipment is recorded.

[Procedure amendment 7]

[Document to be Amended] Specification

[Item(s) to be Amended] 0010

[Method of Amendment] Modification

[Proposed Amendment]

[0010] The 2nd communication system of this invention is equipped with remote control which carries out remote control of the electronic equipment, and the remote control is characterized by having the read-out means which reads required information, and an output means to output the required information read by the read-out means from the record medium with which required information required for control of electronic equipment is recorded.

[Procedure amendment 8]

[Document to be Amended] Specification

[Item(s) to be Amended] 0011

[Method of Amendment] Modification

[Proposed Amendment]

[0011] In the 1st remote control of this invention, a receiving means communicates with the database with which required information required for control of electronic equipment is recorded through a network, and is made as [receive / required information]. The output means is made as [output / the required information received by the receiving means].

[Procedure amendment 9]

[Document to be Amended] Specification

[Item(s) to be Amended] 0012

[Method of Amendment] Modification

[Proposed Amendment]

[0012] In the 1st communication system of this invention, remote control is made as [carry out / remote control of the electronic equipment], and required information required for control of electronic equipment is recorded on the database. In remote control, a receiving means communicates with a database through a network, and is made as [receive / required information]. The output means is made as [output / the required information received by the receiving means].

[Procedure amendment 10]

[Document to be Amended] Specification

[Item(s) to be Amended] 0013

[Method of Amendment] Modification

[Proposed Amendment]

[0013] In the 2nd remote control of this invention, a read-out means reads required information from the record medium with which required information required for control of electronic equipment is recorded, and the output means is made as [output / the required information read by the read-out means].

[Procedure amendment 11]

[Document to be Amended] Specification

[Item(s) to be Amended] 0014

[Method of Amendment] Modification

[Proposed Amendment]

[0014] In the 2nd communication system of this invention, remote control is made as [carry out / remote control of the electronic equipment]. And in this remote control, a read-out means reads required information from the record medium with which required information required for control of electronic equipment is recorded, and the output means is made as [output / the required information read by the read-out means].

[Procedure amendment 12]

[Document to be Amended] Specification

[Item(s) to be Amended] 0015

[Method of Amendment] Modification

[Proposed Amendment]

[0015]

[Embodiment of the Invention]

[Procedure amendment 13]

[Document to be Amended] Specification

[Item(s) to be Amended] 0016

[Method of Amendment] Deletion

[Procedure amendment 14]

[Document to be Amended] Specification

[Item(s) to be Amended] 0017

[Method of Amendment] Deletion

[Procedure amendment 15]

[Document to be Amended] Specification

[Item(s) to be Amended] 0018

[Method of Amendment] Deletion

[Procedure amendment 16]

[Document to be Amended] Specification

[Item(s) to be Amended] 0019

[Method of Amendment] Deletion

[Procedure amendment 17]

[Document to be Amended] Specification

[Item(s) to be Amended] 0020

[Method of Amendment] Deletion

[Procedure amendment 18]

[Document to be Amended] Specification

[Item(s) to be Amended] 0021

[Method of Amendment] Deletion

[Procedure amendment 19]

[Document to be Amended] Specification

[Item(s) to be Amended] 0022

[Method of Amendment] Deletion

[Procedure amendment 20]

[Document to be Amended] Specification

[Item(s) to be Amended] 0084

[Method of Amendment] Modification

[Proposed Amendment]

[0084]

[Effect of the Invention] According to the 1st remote control and 1st communication system of this invention, a communication link is performed through the database with which required information required for control of electronic equipment is recorded, and a network, and required information is received and outputted. Therefore, it becomes possible to perform control of electronic equipment exactly based on required information.

[Procedure amendment 21]

[Document to be Amended] Specification

[Item(s) to be Amended] 0085

[Method of Amendment] Modification

[Proposed Amendment]

[0085] According to the 2nd remote control and 2nd communication system of this invention, required information is read and outputted from the record medium with which required information required for control of electronic equipment is recorded. Therefore, it becomes too possible to control electronic equipment exactly.

[Translation done.]